INTRODUCTION TO THE FY 2013 PERFORMANCE PLAN

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In FY 2011, the President signed the GPRA Modernization Act of 2010, instituting a new level of performance requirements for all government agencies. The goal of this legislation is a transparent performance planning and reporting process. NASA's FY 2013 Performance Plan encompasses this approach to performance planning and reflects the current prioritization of NASA's programs and projects. The FY 2013 plan addresses NASA's near and long term goals to better clarify its planning strategy to the public. The FY 2013 plan also streamlines many of the Agency's goals to strengthen their relationship to NASA's Strategic Goals and government-wide goals. This section provides a summary of NASA's performance commitments in FY 2013.

Multi-year performance trends are incorporated into the FY 2013 Performance Plan. Figure 4 provides definitions for the ratings. NASA's method for trending multi-year performance data is to show the linkages between measures tracking similar data and annual progress for follow-on program activities. Linked measures, even if revised in subsequent years, are shown as related performance data. They are not meant to show back data for measures written exactly the same. In some cases, measures have been updated over the years to improve accuracy and data quality. For detailed information on performance ratings and measures from FY 2009 to FY 2011, visit http://www.nasa.gov/news/budget/index.html.

Figure 4: Rating Criteria for Annual Performance Goals

Timeframe: When Will the APG Be Achieved	Rating Criteria for APG Types			Rating
	Single Milestone or Deliverable	Multiple Deliverables, Targeted Performance, and Efficiencies	On-going Activities, Services, or Management Processes	
Current FY as planned.	NASA achieved the event or the deliverable met the intent of the APG within the timeframe.	The program/project reached the stated numeric target.	The intended result of the program/project was achieved as defined by internally held success criteria.	Green
Achieve next FY (will not achieve this FY as planned).	NASA did not achieve this APG in the current fiscal year, but anticipates achieving it during the next fiscal year.			Yellow
Will not be achieved, but progress was made.	N/A	NASA failed to achieve this APG, but made significant progress as defined by reaching 80% of the target or other internally held success criteria.	The intended results of the program/project were not achieved in this fiscal year, but significant progress was accomplished, as defined by internally held success criteria.	
Will not be achieved.	NASA did not achieve the APG and does not anticipate completing it within the next fiscal year.	NASA achieved less than 80% of the target or other internally held success criteria.	Neither intended results nor significant progress were achieved. The progress toward the APG does not meet standards for significant progress for the internally held success criteria.	Red
Will not be achieved due to cancellation or postponement.	NASA senior management canceled this APG and the Agency is no longer pursuing activities relevant to this APG or the program did not have activities relevant to the APG during the fiscal year.			White

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†FY12 trending is shown as required but ratings data will not be available until close of fiscal year.

†† The Performance Goals in support of Earth Science, Heliophysics, Planetary Science, and Astrophysics themes are distinct activities supporting the scientific objectives established in NASA's Strategic Plan.

FY 2013 Performance Plan				Multi-year Performance Data			
Measure #	Description	Contributing Theme	Contributing Program	FY09	FY10	FY11	FY12†
Strategic Goal 1	**Extend and sustain human activities across the solar system.**						
Outcome 1.1	Sustain the operation and full use of the International Space Station (ISS) and expand efforts to utilize the ISS as a National Laboratory for scientific, technological, diplomatic, and educational purposes and for supporting future objectives in human space exploration.						
Performance Goal 1.1.1.1	Maintain capability for six on-orbit crew members.						
APG 1.1.1.1: ISS 13-1	In concert with the International Partners, maintain a continuous six crew capability on the ISS by coordinating and managing resources, logistics, systems, and operational procedures.	International Space Station	International Space Station	9ISS6 Green	10ISS07 Green	ISS-11-1 Green	ISS-12-1
APG 1.1.1.1: ISS 13-2	Complete at least three flights, delivering research and logistics hardware to the ISS, by U.S. developed cargo delivery systems.	International Space Station	International Space Station	9ISS6 Green	10ISS07 Green	ISS-11-1 Green	ISS-12-3
Performance Goal 1.1.2.1	Advance engineering, technology, and science research on the ISS.						
APG 1.1.2.1: ISS 13-3	Accomplish a minimum of 90 percent of the on-orbit research and technology development objectives. Objectives are baselined by NASA and the ISS Non-profit organization one month prior to each increment, which is the time period between crew rotations.	International Space Station	International Space Station	9ISS2 Green	10ISS02 Green	ISS-11-5 Green	ISS-12-6
APG 1.1.2.1: ISS 13-4	Fully utilize the ISS by ensuring that at least 75 percent of the research sites available are used.	International Space Station	International Space Station				

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FY 2013 Performance Plan				Multi-year Performance Data			
Measure #	Description	Contributing Theme	Contributing Program	FY09	FY10	FY11	FY12†
Performance Goal 1.1.2.2	Conduct basic and applied biological and physical research to advance and sustain U.S. scientific expertise.						
APG 1.1.2.2: ISS - 13-5	Conduct flight definition reviews for at least five flight experiments in fundamental space biology that were selected through the 2010 International Space Life Sciences Research Announcement.	International Space Station	International Space Station	9AC3 Green	10AC03 Green	ERD-11-1 Green	ERD-12-1
APG 1.1.2.2: ISS-13-6	Deliver at least four physical sciences payloads for launch to the ISS.	International Space Station	International Space Station	9AC1 Green	10AC01 Green	ERD-11-2 Green	ERD-12-2
APG 1.1.2.2: ISS-13-7	Conduct at least six experiments in combustion, fluids, or materials sciences on the ISS.	International Space Station	International Space Station	9AC2 Green	10AC02 Green	ERD-11-3 Green	ERD-12-3
Outcome 1.2	Develop competitive opportunities for the commercial community to provide best value products and services to low Earth orbit and beyond.						
Performance Goal 1.2.1.1	Create opportunities for interchange with commercial industry while developing competitive opportunities.						
APG 1.2.1.1: CS 13-1	Execute Space Act Agreements (SAAs) for development of a commercial Crew Transportation System (CTS).	Commercial Spaceflight	Commercial Crew	9SFS5 Green	None	CS-11-1 Green	CS-12-1
Outcome 1.3	Develop an integrated architecture and capabilities for safe crewed and cargo missions beyond low Earth orbit.						
Performance Goal 1.3.1.1	Complete design reviews for the Space Launch System (SLS).						
APG 1.3.1.1: ESD-13-1	Complete the SLS Preliminary Design Review (PDR) and establish the technical design, cost, and schedule baseline for the SLS first flight.	Exploration Systems and Development	Space Launch Systems	None	None	HEC-11-1 Green	HEC-12-1
Performance Goal 1.3.1.2	Complete design reviews for Orion Multi-Purpose Crew Vehicle (MPCV).						
APG 1.3.1.2: ESD-13-2	Manufacture Orion Multi-Purpose Crew Vehicle (MPCV) flight test hardware required for initial integration testing for the Exploration Flight Test 1 (EFT-1).	Exploration Systems and Development	Orion Multi-Purpose Crew Vehicle	None	None	HEC-11-2 Green	HEC-12-2
Performance Goal 1.3.2.1	Develop technologies that will enable biomedical research and mitigate health risks associated with human space exploration missions.						
APG	Complete two ISS physiological flight experiments that define	Exploration	Human Research	None	None	ERD-11-	ERD-12-

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Measure #	Description	Contributing Theme	Contributing Program	FY09	FY10	FY11	FY12†
1.3.2.1: ERD 13-1	requirements for maintaining astronaut health for long-duration missions.	Research and Development				4 Green	4
Performance Goal 1.3.3.1	Prioritize the knowledge of hazards, opportunities, and potential destinations for human space exploration that will be of use to future operations of an integrated architecture for human space exploration.						
APG 1.3.3.1: ERD 13-2	Develop a set of strategic knowledge gaps on potential destinations for human spaceflight, conduct a review of these gaps by external advisory groups, and document the results in the Global Exploration Roadmap.	Exploration Research and Development	Advanced Exploration Systems	None	None	None	ERD-12-7
Strategic Goal 2	**Expand scientific understanding of the Earth and the universe in which we live.**						
Outcome 2.1	Advance Earth system science to meet the challenges of climate and environmental change.						
Performance Goal 2.1.1.1††	Provide national scientific capabilities through necessary skilled researchers and supporting knowledge base. (In support of objective 2.1.1: "Improve understanding of and improve the predictive capability for changes in the ozone layer, climate forcing, and air quality associated with changes in atmospheric composition.")						
APG 2.1.1.1: ES-13-1	Demonstrate planned progress in understanding and improving predictive capability for changes in the ozone layer, climate forcing, and air quality associated with changes in atmospheric composition. Progress relative to the objectives in NASA's 2010 Science Plan will be evaluated by external expert review.	Earth Science	Multiple Programs	9ES1 Green	10ES01 Green	ES-11-1 Green	ES-12-1
Performance Goal 2.1.1.2††	By 2015, launch at least two missions in support of objective 2.1.1.						
APG 2.1.1.2: ES-13-2	Complete the Earth Venture-2 (EV-2) Mission Definition Review (MDR).	Earth Science	Earth System Science Pathfinder	None	None	ES-11-4 Green	ES-12-3
Performance Goal 2.1.2.1††	Provide national scientific capabilities through necessary skilled researchers and supporting knowledge base. (In support of objective 2.1.2: "Enable improved predictive capability for weather and extreme weather events.")						
APG	Demonstrate planned progress in enabling improved predictive	Earth Science	Multiple Programs	9ES7	10ES04	ES-11-5	ES-12-4

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Measure #	Description	Contributing Theme	Contributing Program	FY09	FY10	FY11	FY12†
2.1.2.1: ES-13-3	capability for weather and extreme weather events. Progress relative to the objectives in NASA's 2010 Science Plan will be evaluated by external expert review.			Green	Green	Green	
Performance Goal 2.1.2.2††	By 2015, launch at least two missions in support of objective 2.1.2.						
APG 2.1.2.2: ES-13-4	Complete the Global Precipitation Measurement (GPM) mission observatory environmental testing.	Earth Science	Earth Systematic Missions	9ES8 Yellow	10ES06 Green	ES-11-6 Yellow	ES-12-5
APG 2.1.2.2: ES-13-2	Complete the Earth Venture 2 (EV-2) Mission Definition Review (MDR).	Earth Science	Earth System Science Pathfinder	None	None	ES-11-4 Green	ES-12-3
Performance Goal 2.1.3.1††	Provide national scientific capabilities through necessary skilled researchers and supporting knowledge base. (In support of objective 2.1.3: "Quantify, understand, and predict changes in Earth's ecosystems and biogeochemical cycles, including the global carbon cycle, land cover, and biodiversity."						
APG 2.1.3.1: ES-13-5	Demonstrate planned progress in quantifying, understanding and predicting changes in Earth's ecosystems and biogeochemical cycles, including the global carbon cycle, land cover, and biodiversity. Progress relative to the objectives in NASA's 2010 Science Plan will be evaluated by external expert review.	Earth Science	Multiple Programs	9ES10 Green	10ES07 Green	ES-11-7 Green	ES-12-6
Performance Goal 2.1.3.2††	By 2015, launch at least two missions in support of objective 2.1.3.						
APG 2.1.3.2: ES-13-6	Launch the Landsat Data Continuity Mission (LDCM).	Earth Science	Earth Systematic Missions	9ES11 Green	10ES08 Green	ES-11-8 Green	ES-12-7
APG 2.1.3.2: ES-13-2	Complete the Earth Venture-2 (EV-2) Mission Definition Review (MDR).	Earth Science	Earth System Science Pathfinder	None	None	ES-11-4 Green	ES-12-3
Performance Goal 2.1.4.1††	Provide national scientific capabilities through necessary skilled researchers and supporting knowledge base. (In support of objective 2.1.4: "Quantify the key reservoirs and fluxes in the global water cycle and assess water cycle change and water quality.")						

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Measure #	Description	Contributing Theme	Contributing Program	FY09	FY10	FY11	FY12†
APG 2.1.4.1: ES-13-7	Demonstrate planned progress in quantifying the key reservoirs and fluxes in the global water cycle and assessing water cycle change and water quality. Progress relative to the objectives in NASA's 2010 Science Plan will be evaluated by external expert review.	Earth Science	Multiple Programs	9ES13 Green	10ES09 Green	ES-11-9 Green	ES-12-8
Performance Goal 2.1.4.2††	By 2015, launch at least two missions in support of objective 2.1.4.						
APG 2.1.4.2: ES-13-4	Complete the Global Precipitation Measurement (GPM) mission observatory environmental testing.	Earth Science	Earth Systematic Missions	9ES8 Yellow	10ES06 Green	ES-11-6 Yellow	ES-12-5
APG 2.1.4.2: ES-13-8	Complete the Soil Moisture Active-Passive (SMAP) Systems Integration Review (SIR).	Earth Science	Earth Systematic Missions	9ES14 Green	10ES10 Yellow	ES-11-10 Yellow	ES-12-9
Performance Goal 2.1.5.1††	Provide national scientific capabilities through necessary skilled researchers and supporting knowledge base. (In support of objective 2.1.5: "Improve understanding of the roles of the ocean, atmosphere, land and ice in the climate system and improve predictive capability for its future evolution.")						
APG 2.1.5.1: ES-13-9	Demonstrate planned progress in understanding the roles of ocean, atmosphere, land, and ice in the climate system and improving predictive capability for future evolution. Progress relative to the objectives in NASA's 2010 Science Plan will be evaluated by external expert review.	Earth Science	Multiple Programs	9ES15 Green	10ES11 Green	ES-11-11 Green	ES-12-10
Performance Goal 2.1.5.2††	By 2015 launch at least three missions in support of objective 2.1.5.						
APG 2.1.5.2: ES-13-10	Complete the Ice, Cloud, and Land Elevation Satellite-2 (ICESat-2) Critical Design Review.	Earth Science	Earth Systematic Missions	9ES16 Yellow	10ES12 Green	ES-11-14 Yellow	ES-12-13
Performance Goal 2.1.6.1††	Provide national scientific capabilities through necessary skilled researchers and supporting knowledge base. (In support of objective 2.1.6: "Characterize the dynamics of Earth's surface and interior and form the scientific basis for the assessment and mitigation of natural hazards and response to rare and extreme events.")						

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Measure #	Description	Contributing Theme	Contributing Program	FY09	FY10	FY11	FY12†
APG 2.1.6.1: ES-13-11	Demonstrate planned progress in characterizing the dynamics of Earth's surface and interior and forming the scientific basis for the assessment and mitigation of natural hazards and response to rare and extreme events. Progress relative to the objectives in NASA's 2010 Science Plan will be evaluated by external expert review.	Earth Science	Multiple Programs	9ES17 Green	10ES13 Green	ES-11-15 Green	ES-12-14
Performance Goal 2.1.6.2††	By 2015, launch at least one mission in support of objective 2.1.6.						
APG 2.1.6.2: ES-13-6	Launch the Landsat Data Continuity Mission (LDCM).	Earth Science	Earth Systematic Missions	9ES11 Green	10ES08 Green	ES-11-8 Green	ES-12-7
Performance Goal 2.1.7.1††	Provide national scientific capabilities through necessary skilled researchers and supporting knowledge base. (In support of objective 2.1.7: "Enable the broad use of Earth system science observations and results in decision-making activities for societal benefits.")						
APG 2.1.7.1: ES-13-12	Advance at least 25 percent of decision-support projects one Applications Readiness Level. The Applications Readiness Level is a nine-stage index for tracking the advancement of an Earth science applications project along a continuum from initial concept through development and transition to operational use.	Earth Science	Applied Sciences	9ES18 Green	10ES14 Green	ES-11-16 Green	ES-12-15
APG 2.1.7.1: ES-13-13	Increase the number of science data products delivered to Earth Observing System Data and Information System (EOSDIS) users.	Earth Science	Earth Science Multi-Mission Operations	9ES19 Green	10ES15 Green	ES-11-17 Green	ES-12-16
APG 2.1.7.1: ES-13-14	Maintain a high level of customer satisfaction, as measured by exceeding the most recently available federal government average rating of the Customer Satisfaction Index.	Earth Science	Earth Science Multi-Mission Operations	9ES20 Green	10ES16 Green	ES-11-18 Green	ES-12-17
Outcome 2.2	Understand the Sun and its interactions with the Earth and the solar system.						
Performance Goal 2.2.1.1††	Provide national scientific capabilities through necessary skilled researchers and supporting knowledge base. (In support of objective 2.2.1: "Improve understanding of the fundamental physical processes of the space environment from the Sun to						

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Measure #	Description	Contributing Theme	Contributing Program	FY09	FY10	FY11	FY12†
	Earth, to other planets, and beyond to the interstellar medium.")						
APG 2.2.1.1: HE-13-1	Demonstrate planned progress in understanding the fundamental physical processes of the space environment from the Sun to Earth, to other planets, and beyond to the interstellar medium. Progress relative to the objectives in NASA's 2010 Science Plan will be evaluated by external expert review.	Heliophysics	Multiple Programs	9HE1 Green	10HE01 Green	HE-11-1 Green	HE-12-1
APG 2.2.1.1: HE-13-2	Achieve mission success criteria for the Solar Dynamics Observatory (SDO).	Heliophysics	Living with a Star	None	None	None	None
Performance Goal 2.2.1.2††	By 2015, launch two missions in support of objective 2.2.1.						
APG 2.2.1.2: HE-13-3	Complete integration of the payload to the Magnetospheric Multiscale (MMS) satellite #1 (of four).	Heliophysics	Solar Terrestrial Probes	9HE2 Green	10HE02 Green	HE-11-2 Green	HE-12-2
Performance Goal 2.2.2.1††	Provide national scientific capabilities through necessary skilled researchers and supporting knowledge base. (In support of objective 2.2.2: "Improve understanding of how human society, technological systems, and the habitability of planets are affected by solar variability interacting with planetary magnetic fields and atmospheres.")						
APG 2.2.2.1: HE-13-2	Achieve mission success criteria for the Solar Dynamics Observatory (SDO).	Heliophysics	Living with a Star	None	None	None	None
APG 2.2.2.1: HE-13-4	Demonstrate planned progress in understanding how human society, technological systems, and the habitability of planets are affected by solar variability interacting with planetary magnetic fields and atmospheres. Progress relative to the objectives in NASA's 2010 Science Plan will be evaluated by external expert review.	Heliophysics	Multiple Programs	9HE6 Green	10HE06 Green	HE-11-4 Green	HE-12-4
Performance Goal 2.2.2.2††	By 2015, launch two missions in support of objective 2.2.2.						
APG 2.2.2.2: HE-13-3	Complete integration of the payload to the Magnetospheric Multiscale (MMS) satellite #1 (of four).	Heliophysics	Solar Terrestrial Probes	9HE2 Green	10HE02 Green	HE-11-2 Green	HE-12-2
Performance Goal 2.2.3.1††	Provide national scientific capabilities through necessary skilled researchers and supporting knowledge base. (In support of						

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Measure #	Description	Contributing Theme	Contributing Program	FY09	FY10	FY11	FY12†
	objective 2.2.3: "Maximize the safety and productivity of human and robotic explorers by developing the capability to predict extreme and dynamic conditions in space.")						
APG 2.2.3.1: HE-13-5	Demonstrate planned progress in maximizing the safety and productivity of human and robotic explorers by developing the capability to predict the extreme and dynamic conditions in space. Progress relative to the objectives in NASA's 2010 Science Plan will be evaluated by external expert review.	Heliophysics	Multiple Programs	9HE8 Green	10HE08 Green	HE-11-5 Green	HE-12-5
Performance Goal 2.2.3.2††	By 2017, launch at least two missions in support of objective 2.3.2.						
APG 2.2.3.2: HE-13-6	Complete the Solar Orbiter Collaboration Mission Confirmation Review.	Heliophysics	Living with a Star				
Outcome 2.3	Ascertain the content, origin, and evolution of the solar system and the potential for life elsewhere.						
Performance Goal 2.3.1.1††	Provide national scientific capabilities through necessary skilled researchers and supporting knowledge base. (In support of objective 2.3.1: "Inventory solar system objects and identify the processes active in and among them.")						
APG 2.3.1.1: PS-13-1	Demonstrate planned progress in inventorying solar system objects and identifying the processes active in and among them. Progress relative to the objectives in NASA's 2010 Science Plan will be evaluated by external expert review.	Planetary Science	Multiple Programs	None	None	PS-11-1 Green	PS-12-1
Performance Goal 2.3.1.2††	By 2017, launch at least two missions in support of objective 2.3.1.						
APG 2.3.1.2: PS-13-2	Initiate the preliminary design for the Discovery 12 mission.	Planetary Science	Discovery	None	None	None	PS-12-3
APG 2.3.1.2: PS-13-5	Complete the OSIRIS-REx Preliminary Design Review (PDR).	Planetary Science	New Frontiers	None	10PS04 Green	PS-11-3 Green	PS-12-2
Performance Goal 2.3.2.1††	Provide national scientific capabilities through necessary skilled researchers and supporting knowledge base. (In support of objective 2.3.2: "Improve understanding of how the Sun's family of planets, satellites, and minor bodies originated and evolved.")						

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Measure #	Description	Contributing Theme	Contributing Program	FY09	FY10	FY11	FY12†
APG 2.3.2.1: PS-13-3	Demonstrate planned progress in understanding how the Sun's family of planets, satellites, and minor bodies originated and evolved. Progress relative to the objectives in NASA's 2010 Science Plan will be evaluated by external expert review.	Planetary Science	Multiple Programs	9PS1 Green	10PS01 Green	PS-11-4 Green	PS-12-4
Performance Goal 2.3.2.2††	By 2015, launch at least three missions in support of objective 2.3.2.						
APG 2.3.2.2: PS-13-4	Launch the Lunar Atmosphere and Dust Environment Explorer (LADEE).	Planetary Science	Lunar Quest	None	None	None	PS-12-6
APG 2.3.2.2: PS-13-5	Complete the OSIRIS-REx Preliminary Design Review (PDR).	Planetary Science	New Frontiers	None	10PS04 Green	PS-11-3 Green	PS-12-2
Performance Goal 2.3.3.1††	Provide national scientific capabilities through necessary skilled researchers and supporting knowledge base. (In support of objective 2.3.3: "Improve understanding of the processes that determine the history and future of habitability of environments on Mars and other solar system bodies.")						
APG 2.3.3.1: PS-13-6	Demonstrate planned progress in understanding the processes that determine the history and future of habitability of environments on Mars and other solar system bodies. Progress relative to the objectives in NASA's 2010 Science Plan will be evaluated by external expert review.	Planetary Science	Multiple Programs	9PS8 Green	10PS09 Green	PS-11-8 Green	PS-12-7
Performance Goal 2.3.3.2††	By 2015, launch at least two missions in support of objective 2.3.3.						
APG 2.3.3.2: PS-13-7	Complete the Mars Atmosphere and Volatile EvolutioN Mission (MAVEN) Pre-Ship Review (PSR).	Planetary Science	Mars Exploration	None	10PS08 Green	PS-11-10 Green	PS-12-9
Performance Goal 2.3.4.1††	Provide national scientific capabilities through necessary skilled researchers and supporting knowledge base. (In support of objective 2.3.4: "Improve understanding of the origin and evolution of Earth's life and biosphere to determine if there is or ever has been life elsewhere in the universe.")						
APG 2.3.4.1: PS-13-8	Demonstrate planned progress in understanding the origin and evolution of life on Earth and throughout the biosphere to determine if there is or ever has been life elsewhere in the universe. Progress relative to the objectives in NASA's 2010	Planetary Science	Multiple Programs	9PS5 Green	10PS07 Green	PS-11-11 Green	PS-12-11

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Measure #	Description	Contributing Theme	Contributing Program	FY09	FY10	FY11	FY12†
	Science Plan will be evaluated by external expert review.						
Performance Goal 2.3.5.1††	Provide national scientific capabilities through necessary skilled researchers and supporting knowledge base. (In support of objective 2.3.5: "Identify and characterize small bodies and the properties of planetary environments that pose a threat to terrestrial life or exploration or provide potentially exploitable resources.")						
APG 2.3.5.1: PS-13-9	Demonstrate planned progress in identifying and characterizing small bodies and the properties of planetary environments that pose a threat to terrestrial life or exploration or provide potentially exploitable resources. Progress relative to the objectives in NASA's 2010 Science Plan will be evaluated by external expert review.	Planetary Science	Multiple Programs	9PS9 Green	10PS10 Green	PS-11-12 Green	PS-12-12
Performance Goal 2.3.5.2	Return data for selection of destinations in order to lower risk for human space exploration beyond low Earth orbit.						
APG 2.3.5.2: PS-13-10	Demonstrate planned progress in characterizing potentially hazardous objects that are possible destinations for future human space exploration.	Planetary Science	Multiple Programs	None	None	None	PS-12-13
Outcome 2.4	Discover how the universe works, explore how it began and evolved, and search for Earth-like planets.						
Performance Goal 2.4.1.1††	Provide national scientific capabilities through necessary skilled researchers and supporting knowledge base. (In support of objective 2.4.1: "Improve understanding of the origin and destiny of the universe, and the nature of black holes, dark energy, dark matter, and gravity.")						
APG 2.4.1.1: AS-13-1	Demonstrate planned progress in understanding the origin and destiny of the universe and the nature of black holes, dark energy, dark matter, and gravity. Progress relative to the objectives in NASA's 2010 Science Plan will be evaluated by external expert review.	Astrophysics	Multiple Programs	9AS1 Green	10AS01 Green	AS-11-1 Green	AS-12-1
APG 2.4.1.1: AS-13-2	Achieve mission success criteria for the Fermi Gamma-ray Space Telescope.	Astrophysics	Physics of the Cosmos	None	10AS04 Green	None	None
Performance	Provide national scientific capabilities through necessary skilled						

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Measure #	Description	Contributing Theme	Contributing Program	FY09	FY10	FY11	FY12†
Goal 2.4.2.1††	researchers and supporting knowledge base. (In support of objective 2.4.2: "Improve understanding of the many phenomena and processes associated with galaxy, stellar, and planetary system formation and evolution from the earliest epochs to today.")						
APG 2.4.2.1: AS-13-3	Demonstrate planned progress in understanding the many phenomena and processes associated with galaxy, stellar, and planetary system formation and evolution from the earliest epochs to today. Progress relative to the objectives in NASA's 2010 Science Plan will be evaluated by external expert review.	Astrophysics	Multiple Programs	9AS6 Green	10AS09 Green	AS-11-3 Green	AS-12-3
Performance Goal 2.4.2.2††	Design and assemble the James Webb Space Telescope (JWST).						
APG 2.4.2.2: JWST-13-1	Initiate James Webb Space Telescope Backplane Support Frame Assembly.	James Webb Space Telescope	James Webb Space Telescope	9AS4 Green	10AS06 Green	JWST-11-1 Green	JWST-12-1
Performance Goal 2.4.2.3††	Develop and operate an airborne infrared astrophysics observatory.						
APG 2.4.2.3: AS-13-4	Complete the Systems Requirement Review (SRR) for the initial second generation Stratospheric Observatory for Infrared Astronomy (SOFIA) instrument.	Astrophysics	Cosmic Origins	9AS5 Yellow	10AS07 Yellow	AS-11-4 Green	AS-12-4
Performance Goal 2.4.3.1††	Provide national scientific capabilities through necessary skilled researchers and supporting knowledge base. (In support of objective 2.4.3: "Generate a census of extra-solar planets and measure their properties.")						
APG 2.4.3.1: AS-13-5	Demonstrate planned progress in generating a census of extra-solar planets and measuring their properties. Progress relative to the objectives in NASA's 2010 Science Plan will be evaluated by external expert review.	Astrophysics	Multiple Programs	9AS7 Green	10AS10 Green	AS-11-5 Green	AS-12-5
APG 2.4.3.1: AS-13-6	Achieve mission success criteria for the Kepler mission.	Astrophysics	Exoplanet Exploration	9AS8 Green	None	None	None
Strategic Goal 3	**Create the innovative new space technologies for our exploration, science, and economic future.**						
Outcome 3.1	Sponsor early stage innovation in space technologies in order to improve the future capabilities of NASA, other government agencies, and the aerospace industry.						

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Measure #	Description	Contributing Theme	Contributing Program	FY09	FY10	FY11	FY12†
Performance Goal 3.1.1.1	Develop and advance space technologies that support NASA's science, exploration and discovery missions.						
APG 3.1.1.1-ST-13-1	Research, study, or develop concepts for 100 technologies as documented in technology reports or plans.	Space Technology	Crosscutting Space Technology Development	None	None	ST-11-6 Green	ST-12-1
Outcome 3.2	Infuse game changing and crosscutting technologies throughout the Nation's space enterprise, to transform the Nation's space mission capabilities.						
Performance Goal 3.2.1.1	Develop and advance space technologies that support NASA's science, exploration, and discovery missions.						
APG 3.2.1.1-ST-13-2	Complete three feasibility studies, ground demonstrations, or laboratory experiments proving the technical feasibility of new space technologies.	Space Technology	Crosscutting Space Technology Development	None	None	ST-11-7 Green	ST-12-7
APG 3.2.1.1: ST-13-3	Implement at least one new small satellite mission that was initiated in FY 2012 and demonstrate game changing or crosscutting technologies in space.	Space Technology	Crosscutting Space Technology Development	None	None	None	ST-12-9
APG 3.2.1.1: ST-13-4	Implement at least three Technology Demonstration Missions (TDM) technology development projects that were initiated in the previous two years.	Space Technology	Crosscutting Space Technology Development	None	None	ST-11-10 Green	ST-12-10
APG 3.2.1.1: ST-13-5	Select and fly technology payloads from NASA, other government agencies, industry, and academia using flight services procured from at least three commercial reusable suborbital or parabolic platform providers.	Space Technology	Crosscutting Space Technology Development	None	None	ST-11-11 Green	ST-12-11
Outcome 3.3	Develop and demonstrate the critical technologies that will make NASA's exploration, science, and discovery missions more affordable and more capable.						
Performance Goal 3.3.1.1	Develop and test technologies that can be used in human exploration missions.						
APG 3.3.1 .1: ERD-13-3	Test docking and anchoring techniques for asteroid missions using a prototype crew excursion vehicle, the Multi-Mission Space Exploration Vehicle (MMSEV), moving on an air bearing floor.	Exploration Research and Development	Advanced Exploration Systems				
Performance Goal 3.3.2.1	Develop advanced spacesuits to improve the ability of astronauts to conduct Extra Vehicular Activities (EVA) for in-space operations and surface exploration.						
APG	Test a packaged Portable Life Support System (PLSS) for an	Exploration	Advanced	None	None	ERD-11-	ERD-12-

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Measure #	Description	Contributing Theme	Contributing Program	FY09	FY10	FY11	FY12†
3.3.2.1: ERD-13-4	advanced spacesuit in a vacuum chamber.	Research and Development	Exploration Systems			8 Green	9
Outcome 3.4	Facilitate the transfer of NASA technology and engage in partnerships with other government Agencies, industry, and international entities to generate U.S. commercial activity and other public benefits.						
Performance Goal 3.4.1.1	Accelerate the development and adoption of NASA-funded technology through the establishment of cost-sharing partnerships.						
APG 3.4.1.1: ST-13-6	Establish a total of two partnerships with U.S. industry, other U.S. agencies, or other entities to develop technology that supports NASA's missions or national interests.	Space Technology	Partnership Development and Strategic Integration	9IPP2 Green	None	ST-11-14 Green	ST-12-13
Strategic Goal 4	**Advance aeronautics research for societal benefit.**						
Outcome 4.1	Develop innovative solutions and advanced technologies through a balanced research portfolio to improve current and future air transportation.						
Performance Goal 4.1.1.1	Transfer knowledge to the aviation community to better manage safety in aviation.						
APG 4.1.1.1: AR-13-1	Conduct flight tests to characterize the ice crystal weather environment, which can adversely affect jet engine performance.	Aeronautics	Aviation Safety	None	None	None	AR-12-1
APG 4.1.1.1: AR-13-2	Develop onboard capabilities that aid in-flight decision-making through instantaneous health assessment of aircraft systems.	Aeronautics	Aviation Safety	9AT1 Green	10AT01 Green	AR-11-2 Green	AR-12-2
Performance Goal 4.1.2.1	Demonstrate advanced technologies and solutions to achieve fuel efficient increases in operational performance of the Next Generation Air Transportation System (NextGen) while reducing noise and emissions.						
APG 4.1.2.1: AR-13-3	Conduct human-in-the-loop simulations for taxi operations conformance, which will reduce fuel consumption during movement on the airport surface.	Aeronautics	Airspace Systems	None	None	None	None
Performance Goal 4.1.3.1	Deliver tools, technologies, and knowledge that can be used to more efficiently and effectively design future air vehicles and their components to overcome national performance and						

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Measure #	Description	Contributing Theme	Contributing Program	FY09	FY10	FY11	FY12†
	capability challenges.						
APG 4.1.3.1: AR-13-4	Develop, improve, and validate a multi-fidelity toolset to assess the noise characteristics of future subsonic aircraft.	Aeronautics	Fundamental Aeronautics	9AT7 Green	10AT07 Green	AR-11-6 Green	None
APG 4.1.3.1: AR-13-5	Validate high fidelity tools for sonic boom and drag prediction to enable the design of future supersonic air vehicles.	Aeronautics	Fundamental Aeronautics	9AT9 Green	10AT09 Green	AR-11-8 Green	AR-12-10
Outcome 4.2	Conduct systems-level research on innovative and promising aeronautics concepts and technologies to demonstrate integrated capabilities and benefits in a relevant flight and/or ground environment.						
Performance Goal 4.2.1.1	Demonstrate advanced technologies to reduce fuel burn, noise, and emissions for advanced aircraft expected for introduction into the Next Generation Air Transportation System.						
APG 4.2.1.1: AR-13-6	Conduct tests to validate low-noise characteristics of a hybrid wing body aircraft concept.	Aeronautics	Integrated Systems Research	None	None	None	None
APG 4.2.1.1: AR-13-7	Complete flight evaluations to assess the capabilities of the Live, Virtual, Constructive (LVC) distributed simulation environment.	Aeronautics	Integrated Systems Research	None	None	None	None
Strategic Goal 5	**Enable program and institutional capabilities to conduct NASA's aeronautics and space activities.**						
Outcome 5.1	Identify, cultivate, and sustain a diverse workforce and inclusive work environment that is needed to conduct NASA missions.						
Performance Goal 5.1.1.1	Define and build diverse workforce skills and competencies needed for the Agency's technology development and deep space exploration.						
APG 5.1.1.1: AMO-13-1	Sustain NASA's Innovation Score, as measured by the innovation-related questions in the Employee Viewpoint Survey (EVS), by taking actions like refining and updating human capital policies, programs, and systems to support and encourage innovation to meet NASA's missions.	Agency Management and Operations	Agency Management	9ED5 Green	10ED04 Yellow	AMO-11-2 Green	AMO-12-1

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Measure #	Description	Contributing Theme	Contributing Program	FY09	FY10	FY11	FY12†
Performance Goal 5.1.1.2	Advance a workplace environment that affords Equal Employment Opportunities (EEO) to all employees and takes proactive diversity and inclusion efforts.						
APG 5.1.1.2: AMO-13-2	Sustain five programs and processes designed to proactively prevent discrimination, as outlined in the Model EEO Agency Plan.	Agency Management and Operations	Agency Management	None	10WF01 Green	AMO-11-7 Yellow	AMO-12-7
APG 5.1.1.2: AMO-13-3	Implement three diversity and inclusion capabilities as outlined in the Agency Diversity and Inclusion Strategic Implementation Plan.	Agency Management and Operations	Agency Management	None	10WF02 Green	AMO-11-8 Yellow	AMO-12-8
Performance Goal 5.1.2.1	Assure that students participating in NASA higher education projects are representative of the diversity of the Nation, based on student enrollment data maintained by the U.S. Department of Education's National Center for Education Statistics.						
APG 5.1.2.1: ED-13-1	Provide significant, direct student awards in higher education to (1) racially or ethnically underrepresented students, (2) females, and (3) persons with disabilities at percentages that meet or exceed the national STEM enrollment percentages for these populations, as determined by the most recent publicly available data from the U.S. Department of Education's National Center for Education Statistics for a minimum of two of the three categories.	Education	Multiple Programs	9ED3 Red	10ED03 Yellow	ED-11-1 Yellow	ED-12-1 Yellow
Outcome 5.2	Ensure vital assets are ready, available, and appropriately sized to conduct NASA's missions.						
Performance Goal 5.2.1.1	Through 2015, assure the safety of NASA's activities and reduce damage to assets through the development, implementation, and oversight of Agency-wide safety, reliability, maintainability, and quality assurance policies and procedures.						
APG 5.2.1.1: AMO-13-4	Assure zero fatalities or permanent disabling injuries to the public resulting from NASA activities during FY 2013.	Agency Management and Operations	Safety and Mission Success	None	10SMS01 Green	AMO-11-9 Green	AMO-12-9
APG 5.2.1.1: AMO-13-5	Maintain a Total Case Rate and Lost Time Case Rate that meets the goals of the President's Protecting Our Workers and Ensuring Reemployment (POWER) initiative.	Agency Management and Operations	Safety and Mission Success	None	10SMS01 Green	AMO-11-10 Red	AMO-12-10

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Measure #	Description	Contributing Theme	Contributing Program	FY09	FY10	FY11	FY12†
APG 5.2.1.1: AMO-13-6	Reduce damage to NASA assets (excluding launched flight hardware) by two percent during FY 2013, based on a five-year running average (that also excludes launched flight hardware).	Agency Management and Operations	Safety and Mission Success	None	10SMS01 Green	AMO-11-11 Red	AMO-12-11
Performance Goal 5.2.2.1	By 2015, reduce data center energy consumption by 30 percent (from baseline data defined during FY 2012).						
APG 5.2.2.1: AMO-13-7	Implement power metering in 100 percent of NASA data centers.	Agency Management and Operations	Agency IT Services (AITS)	None	None	AMO-11-15 Green	AMO-12-15
Performance Goal 5.2.3.1	Between 2012 and 2016, eliminate obsolete and unneeded facilities and support the elimination of facilities that will not be needed after Space Shuttle retirement.						
APG 5.2.3.1: COF-13-1	Initiate the demolition or disposal of five facilities or structures during 2013 to reduce the Agency's footprint.	Construction of Facilities	Institutional CoF	None	None	COF-11-1 Green	COF-12-1
Outcome 5.3	Ensure the availability to the Nation of NASA-owned strategically important test capabilities.						
Performance Goal 5.3.1.1	Review monthly the current state of the NASA and Department of Defense (DoD) test capabilities and known test requirements and test requests.						
APG 5.3.1.1: SFS-13-1	Incorporate test capability modifications and known test requirements in the yearly Rocket Propulsion Test (RPT) Master Plan update.	Space and Flight Support	Rocket Propulsion Test	9SFS4 Yellow	10SFS09 Yellow	SFS-11-1 Green	SFS-12-1
Performance Goal 5.3.2.1	Ensure that testing capabilities are available to support the research, development, test, and engineering milestones of NASA and Department of Defense (DoD) programs.						
APG 5.3.2.1: AR-13-8	Provide a new engine icing test capability to address the high-altitude engine icing problem encountered by commercial aircraft.	Aeronautics	Aeronautics Test	None	None	None	None
Outcome 5.4	Implement and provide space communications and launch capabilities responsive to existing and future science and space exploration missions.						
Performance Goal 5.4.1.1	Complete objectives for all NASA- managed expendable launches.						

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Measure #	Description	Contributing Theme	Contributing Program	FY09	FY10	FY11	FY12†
APG 5.4.1.1: SFS-13-2	Sustain a 100 percent success rate with the successful launch of NASA managed expendable launches as identified on the Launch Services Flight Planning Board manifest.	Space and Flight Support	Launch Services	None	10SFS11 Green	SFS-11-2 Yellow	SFS-12-2
Performance Goal 5.4.1.2	Achieve savings for the Agency through acquisition reforms.						
APG 5.4.1.2: AMO-13-8	Achieve savings in contract costs of $10 million in FY 2013, using FY 2012 as the baseline from which to measure savings.	Agency Management and Operations	Agency Management	None	None	None	None
Performance Goal 5.4.2.1	Prioritize and complete launch and range complex modernization studies and projects to better enable government and commercial activities at the Kennedy Space Center (KSC) and Cape Canaveral Air Force Station (CCAFS).						
APG 5.4.2.1: ESD-13-3	Complete the transfer of required Space Shuttle Program (SSP) and Constellation Program (CxP) assets to the Exploration Ground Systems (EGS) Program for use by SLS/MPCV at the Kennedy Space Center (KSC).	Exploration Systems and Development	Exploration Ground Systems	None	None	None	None
APG 5.4.2.1: SFS-13-3	Continue to establish and develop 21st Century Space Launch Complex (21stCSLC) partnerships aimed at understanding government and commercial ground processing, launch, and range infrastructure requirements, while implementing the modifications identified during the FY 2011 initiated studies.	Space and Flight Support	21st Century Space Launch Complex	None	None	None	None
Performance Goal 5.4.3.1	By 2014, launch two functionally identical Tracking and Data Relay Satellite (TDRS) communications spacecraft to replenish the existing TDRS System constellation.						
APG 5.4.3.1: SFS-13-4	Prepare TDRS L for its Flight Readiness Review (FRR).	Space and Flight Support	Space Communications and Navigation	9SFS6 Green	10SFS07 Yellow	SFS-11-5 Green	SFS-12-5
Outcome 5.5	Establish partnerships, including innovative arrangements, with commercial, international, and other government entities to maximize mission success.						
Performance Goal 5.5.1.1	Working with the ISS National Laboratory management entity, expand utilization of the ISS by non-NASA organizations.						

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Measure #	Description	Contributing Theme	Contributing Program	FY09	FY10	FY11	FY12†
APG 5.5.1.1: ISS-13-8	Facilitate the non-profit organization's (NPO) establishment of the ISS National Laboratory Marketplace to allow researchers and prospective investors to interact and to demonstrate its effectiveness by producing at least one externally funded research agreement.	International Space Station	International Space Station	None	None	ISS-11-6 Green	ISS-12-6
Performance Goal 5.5.2.1	Continue and improve coordination of NASA's international and interagency agreement activities.						
APG 5.5.2.1: AMO-13-9	Implement improved management of existing agreements by incorporating Office of International and Interagency Relations (OIIR)-led interagency agreements into the Agency agreements database (i.e., the Space Act Agreement Maker).	Agency Management and Operations	Agency Management	None	None	AMO-11-18 Green	AMO-12-13
Strategic Goal 6	**Share NASA with the public, educators, and students to provide opportunities to participate in our Mission, foster innovation, and contribute to a strong national economy.**						
Outcome 6.1	Improve retention of students in STEM disciplines by providing opportunities and activities along the education pipeline.						
Performance Goal 6.1.1.1	Assure the availability and accessibility of NASA's online curricular support and resources to improve educators' STEM content knowledge and enhance student interest and proficiency in STEM disciplines.						
APG 6.1.1.1: ED-13-2	Maintain no fewer than 1,000 online STEM-based teaching tools for K-12 and informal educators and higher education faculty.	Education	Multiple Programs	9ED7 Green	10ED07 Green	ED-11-3 Green	ED-12-3
Performance Goal 6.1.2.1	Focus resources, including content, facilities, and personnel, to improve the impact of NASA's STEM education efforts on areas of greatest national need, as identified in the 2011 NASA Education Design Team report, ensuring that NASA-unique assets are leveraged when conducting direct-service student activities.						
APG 6.1.2.1: ED-13-3	Conduct no fewer than 200 interactive K-12 student activities that leverage the unique assets of NASA's missions.	Education	STEM Education and Accountability	None	None	None	None
Performance Goal 6.1.3.1	Promote equal opportunity compliance and encourage best practices among NASA grant recipient institutions.						

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Measure #	Description	Contributing Theme	Contributing Program	FY09	FY10	FY11	FY12†
APG 6.1.3.1: AMO-13-10	Provide equal opportunity assessment and technical assistance, or on-site compliance assessment, at a minimum of two STEM-related programs that receive NASA funding.	Agency Management and Operations	Agency Management	None	10WF11 Green	AMO-11-19 Green	AMO-12-19
Outcome 6.2	Promote STEM literacy through strategic partnerships with formal and informal organizations.						
Performance Goal 6.2.1.1	Increase NASA's engagement in national STEM education policy discussions to improve curricula, inform national standards in STEM subjects, and ensure coordination and sharing of best practices across federal STEM agencies to avoid duplication, overlap, or fragmentation.						
APG 6.2.1.1: ED-13-4	Participate in no fewer than 20 STEM education advisory boards, STEM-related committees, or other events or activities related to national STEM education policy.	Education	Multiple Programs	None	None	None	None
Outcome 6.3	Engage the public in NASA's missions by providing new pathways for participation.						
Performance Goal 6.3.1.1	By 2015, establish an Agency-wide portfolio of participatory engagement opportunities.						
APG 6.3.1.1: AMO-13-11	Evaluate portfolio of participatory engagement activities and establish best practices.	Agency Management and Operations	Agency Management	None	None	AMO-11-20 Green	AMO-12-20
Outcome 6.4	Inform, engage and inspire the public by sharing NASA's missions, challenges, and results.						
Performance Goal 6.4.1.1	Continue to provide opportunities for learners to engage in STEM education through NASA content provided to informal education institutions.						
APG 6.4.1.1: ED-13-5	Maintain the NASA Museum Alliance and/or other STEM Education strategic partnerships in no fewer than 30 states, U.S. Territories and/or the District of Columbia.	Education	STEM Education and Accountability	9ED11 Green	10ED10 Green	ED-11-9 Green	ED-12-9
Performance Goal 6.4.2.1	Use current and emerging communications technologies to reach increasingly broad audiences.						
APG 6.4.2.1: AMO-13-12	Evaluate for effectiveness social media tools the Agency uses to expand public outreach.	Agency Management and Operations	Agency Management	None	None	AMO-11-21 Green	AMO-12-21
Performance Goal	Make available Agency records through the Freedom of Information Act (FOIA) and Privacy Act and Open Gov in						

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Measure #	Description	Contributing Theme	Contributing Program	FY09	FY10	FY11	FY12†
6.4.3.1	accordance with federal laws and regulations.						
APG 6.4.3.1:AMO-13-13	Decrease the Freedom of Information (FOIA) backlog of requests by 10 percent.	Agency Management and Operations	Agency Management	None	None	AMO-11-22 Green	AMO-12-22

†FY 2012 trending is shown as required but ratings data will not be available until close of fiscal year.

†† The Performance Goals in support of Earth Science, Heliophysics, Planetary Science, and Astrophysics themes are distinct activities supporting the scientific objectives established in NASA's Strategic Plan.